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EXAMINER

QIN, YIXING

ART UNIT	PAPER NUMBER
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2625

MAIL DATE	DELIVERY MODE
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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/942,828

Applicant(s)

TSUKADA, TOSHIHIRO

Examiner

Yixing Qin

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-26, 28-35 and 37-52 is/are rejected.
- 7) ☐ Claim(s) 10, 27 and 36 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 7/19/06 have been fully considered but they are not persuasive. The applicant's arguments first argument is that the interface device of Indei is not necessarily external to the printing device. The Indei reference shows one possible combination of a printer and a print control device in Fig. 2, item 5. One can see the various modifications and modules of the device in the other figures. However, the applicant's invention essentially is a re-arrangement of the various modules. Compare, for example, Fig. 1 of the applicant's drawings with Figs. 3 and 8 (the print control device and the backup device for the print control device) of Indei. Both essentially disclose the same part (e.g. cpu, memory and backup memory, communications devices). Thus, the various modules are present, except Indei arranges them in one particular manner, while the applicant arranges them in another. Since Indei has decided to divide up the print server into the printer control device 5a and the printer 5b and also has a backup device, it would have been obvious to divide them up other ways, or even combine them into one machine.

In regards to the lack of a CPU in the applicant's external memory device, the Examiner points out that even though the external memory does not have a CPU, it still has a converter, which is not a general purpose processor, but is still a specific processor for the conversion of information. Again, the CPU of the applicant's invention is placed in a different location than in the Indei reference, but one knows they are to perform general processing for the printing apparatus as a whole.

Regarding the backing up of data, the types of backup data might be different, but the specification's background admits that printer settings can be backed up and restored. Indei discloses that other types of data can be externally backed up. It would be obvious to back up any type of data. While, the data might be for different purposes, there is enough suggestion for one of ordinary skill to create a device for the backing up of settings data to an external memory.

Regarding claim 6, the Indei device would inherently have to be triggered to copy and store backup data. When a user decides that information needs to be backed up, a trigger event inherently occurs to cause the data to be copied and backed up.

Regarding claim 8, the arguments are moot since a new reference, Kawabuchi et al (U.S. Patent No. 5,884,112) is being used to reject the Regarding claims. Please see the rejection below for more detail.

In regards to the USB connection, USB was merely cited as an example of a well known interface used for drawing power from one device by another. Looking at Indei, the floppy drive can be interpreted as being able to draw power from the print control device since it backs up the print control device. Again, from the arguments above, the exact placement of various modules is an obvious variation.

The previously allowable subject matter still stands. The rejection has not changed except for claims 8, 25 and 35 at the bottom, due to the usage of a new reference for the rejections.

This action is made final. Please see the rejection below.

Allowable Subject Matter

Regarding claims 10, 27 and 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening Regarding claims.

The following is a statement of reasons for the indication of allowable subject matter:
All these Regarding claims disclose the restoration of current data/settings/parameters from a data restore unit if after a power on operation that the printer's memory does not hold current data/settings/parameters

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance." Please see the rejection below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

I. Claims 1-7, 9, 11-24, and 26, 28-34, 37-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Indei (U.S. Patent No. 5,131,077) and in view of the applicant's admitted prior art in the background of the specification.

Regarding claims 1, 13, 17 and 22, Indei discloses in Fig. 1 a file holding section (item 32). Column 3, lines 41-43 disclose that this file holding section 32 corresponds to a RAM or a magnetic disk. The RAM or magnetic disk can be nonvolatile.

Although Indei describes data that can be received as billing data, user profile data, confidential data (column 3, lines 27-30), it does not disclose specifically printer settings or historical data.

The applicant's disclosure of the prior art in the background of the specification (henceforth referred to as simply "background") in page 1, lines 15-21, discloses "EEPROM," and storing "printer setting," and historical data."

Indei, discloses in Fig. 1 a file r/w control section (item 31). One can see from the arrows that it can send and receive information from a host. Fig. 1 is an embodiment of Indei's backup control device for a printer (column 3, lines 27-37). The **interface device** is the backup system, and one can see from Figs. 1, 6 or 8 that it interfaces with a network (i.e. can interface to hosts) and a printer.

Indei discloses in column 2, lines 57-59, that "[d]ata prepared [is transferred] to the print server 5, where it is printed out as a hard copy." Fig. 2 shows the print server include a printer.

The applicant's background discloses in page 1, line 26 various command data that could be sent to the printer.

Indei discloses in column 3, lines 55-61, a file renewing and forming section (Fig. 1, item 34). Lines 59-61, especially, disclose that the "...most recently updated important data is stored in the file holding section 34."

In the third embodiment of Indei's invention, one would understand that a floppy disk is used when one is storing data into a floppy disk drive (Fig. 8, item 56). Column 6, lines 34-36 discloses that the data is backed up. Although the above limitations mentions items from the first embodiment in Fig. 1, one can clearly see the third embodiment also has file renewing and holding sections.

One can see from Fig. 8 that the floppy disk drive is part of the backup system **nonvolatile reserve data memory unit** would be the floppy disk that is used to store the data in. When the floppy is in the drive, it would be disposed in the backup system. Also, as mentioned above, it would be obvious to one of ordinary skill in the art to have used other storage devices.

Both the Indei and the prior art in the applicant's background relate to the backing up of protected or important data. Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to store information such as "printer setting" and "historical data" as mentioned in the background of the applicant's specification in a backup unit such as a floppy disk or a file server in Indei's invention. The motivation for doing so would be to backup different types of data deemed necessary by particular users.

The limitations of claims 13, 17 and 22 are steps corresponding to the 2nd through 5th limitations of claim 1. Please refer to claim 1 for these rejections. Please note that the Indei reference discloses three different embodiments in which data is backed up into a file server, web server, and a floppy disk and one skilled in the art would have understood that other known backup storage devices could be used.

Also, for the Regarding claims mentioning the use of a program to perform some steps, one skilled in the art would have known that Indei's invention could be created in either hardware (i.e. circuits/gates) or software (i.e. using hardware description language)

Regarding claims 2, 14, 18 and 23, Indei discloses in Fig. 8 (item 51) a R/W control section for writing to the floppy disk drive. Column 6, lines 25-30 discloses that the backing up of the data to the floppy disk is triggered by a "...predetermined instant in time..." Indei also discloses that the backup would, for instance, be activated once a day (column 3, lines 50-53). However, Indei further discloses "...the operator may make an instruction to transfer the data at any desired instant in time." (column 6, lines 48-49). One would understand the need the to update the backup storage with the most current settings at the time in which the settings in the primary storage changes so that the most recent backup can be used if a restore function is needed to be performed.

Regarding claims 3, 15 and 19, Indei discloses in Fig. 8 (item 51) and column 6, lines 37-43 that a R/W control section acts as data restore unit since it controls the writing of the between the floppy disk and the file holding section.

Indei discloses in column 6, lines 50-55 that data can be quickly restored from the backup when it has been erased. The erasure of the data in the primary memory could trigger a restore.

Column 6, lines 11-12 discloses a time setting section 57, which acts as an event controller for detecting the occurrence of said data-backup triggering event, which is a "predetermined instant in time" as mentioned in the rejection to claim 2 above.

Indei discloses in column 6, lines 50-55 that data can be easily restored to the primary memory if it has been erased. Although not explicitly stated by Indei, one would have understood that the “data-restore triggering event” could include a user inputting a request for file restore. The controller for this would be the file read and write control section (i.e. column 6, lines 37-43).

Regarding claim 5, Indei reference discloses in Fig. 1 a file holding section (item 32). Column 3, lines 41-43 disclose that this file holding section 32 corresponds to a RAM or a magnetic disk. The RAM or magnetic disk could be nonvolatile. Indei describes data that can be received as billing data, user profile data, confidential data (column 3, lines 27-30). Indei, discloses in Fig. 1 a file r/w control section (item 31). One can see from the arrows that it can send and receive information from a host. Fig. 1 is an embodiment of Indei’s backup control device for a printer (column 3, lines 27-37). Indei discloses in column 2, lines 57-59, that “[d]ata prepared [is transferred] to the print server 5, where it is printed out as a hard copy.” Fig. 2 shows the print server include a printer. The applicant’s background discloses in page 1, line 26 various command data that could be sent to the printer.

Indei discloses in column 3, lines 55-61, a file renewing and forming section (Fig. 1, item 34). Lines 59-61, especially, disclose that the “...most recently updated important data is stored in the file holding section 34.” Indei discloses in Fig. 8 (item 51) a R/W control section for writing to the floppy disk drive the data being stored in the file holding section. Again, the interface device would be the backup system of Indei. As mentioned in claim 1 above, the floppy disk would be inside the backup system.

The motivation for the combination of the Indei reference and the applicant's background information is addressed in claim 1.

Regarding claim 6, Indei does not explicitly disclose that data is backed up when it is updated, column 6, lines 44-49 discloses that it could be backed up at a predetermined time or whenever an operator desires. One would want the latest information to be backed up, and it would be obvious to choose the time in which the primary data is to be updated as a predetermined time for backing the data into the reserve data memory.

Regarding claims 7 and 24, from the rejection to claim 6 above, the operator can specify any desired time in which to backup the data in the primary memory to the reserve memory (i.e. floppy disk). Also, the applicant discloses in the background on page 1, lines 16-18, that settings could be restored from flash EEPROMs when the power is turned on.

Regarding claims 9, 26 and 29, Indei discloses in Fig. 8 (item 55) and column 6, lines 37-43 that a R/W control section acts as data restore unit since it controls the writing of the between the floppy disk and the file holding section.

Regarding claims 11 and 28, Indei discloses in Fig. 1 and column 3, lines 43-48 that the data in the file holding section 32 (primary data memory) is backed up in a file server. The Examiner would like to make a slight note here. One skilled in the art can apply different embodiments of Indei's invention depending on the needs (i.e. more storage, portability) of the storage device. Also, it would be obvious from Indei that a file server would be part of the

backup system because Indei simply chose to use a larger storage medium in that embodiment instead of a smaller portable medium such as a floppy disk or even a faster, non-portable medium such as an EEPROM. Again, the backup system is the interface device.

In the same figure, Indei discloses a network for connecting to the file server. In the same figure, Indei discloses a R/W control section (item 31) for controlling reading and writing to and from the file holding section 32. This R/W control section effectively acts as the relay receiver and the relay transmitter as being claimed by the applicant since it communicates with the file server and the file holding section of the print control. The applicant's background discloses on page 1, lines 24-26 that command data can be sent to the printer through an interface to a host device.

Regarding claim 12, Indei discloses a network for connecting to the file server in Fig. 1. One skilled in the art would have understood that file transfer is two-way as indicated but the double-sided arrow next to the word network in Fig 1.

Regarding claims 21 and 38, Although neither Indei nor the applicant's background mentions the use of the above storage mediums, the examiner takes Official Notice that storage mediums such as CDs, floppies, hard disks, etc. are old and well known formats for storing programs and data. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use one of the above storage mediums. The motivation for using such mediums is that the data stored is non-volatile and can be portable when using CDs or floppies.

Regarding claim 30, Indei discloses in Fig. 2 and column 2, lines 57-59 that data from the workstations are transferred through the network to be printed. It would be obvious to send data to be printed from the file server 6 as well, since a file server is just a specialized computer. One can see in Fig. 3 that a transceiver is used for data reception. Indei discloses in Fig. 2 a printer (item 5b) Indei discloses a file holding section in Figs. 1, 6 and 8 for holding important information. This information may be billing data, user profile data, or confidential data (i.e. second data) (column 3, lines 27-30). The applicant's background also mentions that one could store printer setting and history data in flash EEPROMs, which are rewritable memories.

Indei discloses in column 3, lines 55-61, a file renewing and forming section (Fig. 1, item 34). Lines 59-61, especially, disclose that the "...most recently updated important data is stored in the file holding section 34."

Indei discloses in column 4, lines 1-15 the storing of important data from the print control to a file server. The file read and write section is the event control unit. Indei gives an example in column 3, lines 50-53 that the backup event would be that data is periodically backed up, once a day. The condition for the backup event would be that time of the day has arrived.

The data would be backed up to the file server that the data backup is being written to (column 4, lines 10-15). It would have been obvious that the file server stored this data in some form of memory, most likely a hard disk, as this is the conventional method of file storage in a server.

Also, in the third embodiment of Indei's invention, one can see floppy disk drive can be disposed in the backup system as well, as mentioned in claim 1 above.

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Again, the motivation for the combination of these two references is mentioned in the rejection to claim 1.

Regarding claim 31, as mentioned above, the file read and write control section is the event control unit. Column 4, lines 32-46 describes how it handles getting a file from a file server. The restore event, although not explicitly stated, could be a user requesting the file to be restored. A second condition for this to happen is that important data is erased from the file holding section (column 4, lines 58-63). The file read and write control section would also read on the data restore unit, since it controls the reading and writing of data.

Regarding claim 32, the first memory unit would be the file holding section of various embodiments of Indei's invention. Column 3, lines 41-43 discloses that it could be a memory region in a magnetic disk – which is non-volatile. The second memory unit of the various embodiments of Indei would be file/web servers or a floppy disk. One of ordinary skill in the art knows that the data would likely be stored in a hard disk on the servers. Hard disks and floppy disks are non-volatile.

Regarding claim 33, Indei discloses in column 3, lines 55-61, a file renewing and forming section (Fig. 1, item 34). Lines 59-61, especially, disclose that the “...most recently updated important data is stored in the file holding section 34.”

Regarding claim 34, from the rejection to claim 6 above, the operator can specify any desired time in which to backup the data in the primary memory to the reserve memory (i.e.

floppy disk). Also, the applicant discloses in the background on page 1, lines 16-18, that settings could be restored from flash EEPROMs when the power is turned on.

Regarding claim 37, the printer backup control of Indei's invention (Figs. 1, 6, and 8) reads on the computer device since a computer is known to be electronic machinery capable of processing information. The host device can be the file/web server that the backup control is connected to through a network.

Regarding claim 39, in Fig. 1 discloses a R/W control section for controlling reading and writing to and from the file holding section. This R/W control section effectively acts as the relay receiver and the relay transmitter as being claimed by the applicant since it communicates with the file/web server/ floppy disk and the file holding section of the print control.

The backup unit would be the file server that the data backup is being written to (column 4, lines 10-15). It would be obvious that the file server stored this data in some form of memory, most likely a hard disk, which is non-volatile.

In Fig. 1, the file server is connected to through a network.

Regarding claim 40, Fig. 1 is the network is for data transfer.

Regarding claim 41, the limitations of claim 41 have been addressed in claim 11 above except for the additional phrase in the last limitation that says "...under at least partial printer control..." The Indei reference discloses in column 6, lines 45 that data can be backup up

periodically or can be done manually by an operator. This indicates that the printer has at least partial control in the backing up of important data to a data backup device.

Regarding claims 42, 48, Indei discloses wherein the transfer of printer settings data from the printer's primary settings data memory to the interface device's reserve data memory unit is fully under control of said printer. (This goes back to claim 41 above. The periodic transfer of files for backing up is an automated process and would be under full control of the printer.

Regarding claims 43, 49, Indei discloses wherein the connection unit is further effective for permitting the printer to control the recovery of settings data from the reserve data memory unit. (Indei discloses in column 6, lines 37-43 that important data can be restored from the floppy disk.)

Regarding claims 44, 50, Indei discloses further having a power connection connectable to the printer, wherein power to the interface device is provided by the printer. (Indei discloses in Fig. 8 that the backup device is connectable to the printer. Indei does not mention how the backup device is powered. However, the backup device would inherently need power to operate and the power would come from one or more sources chosen from a battery, a power connection into a wall or connection to another device. Therefore, it would have been obvious to have use the printer as a source of power for the backup device (much like how USB devices are known to draw power from a computer). The motivation would be to enable the backup device to be made without a bulky space for batteries or have a cable to connect to a wall outlet and thus saving space.)

Regarding claim 45, Indei discloses wherein said interface device lacks a central processing unit. (One can see in Fig. 8 of Indei that there is no CPU in the backup device.)

Regarding claims 46, 51, Indei discloses wherein the transfer of printer settings data from the printer's primary settings data memory to the interface device's reserve data memory unit is an automated process not requiring user intervention.

Regarding claim 47, the limitations of claim 47 have been addressed in claim 5 above except for the additional phrase in the last limitation that says "...under at least partial printer control..." The Indei reference discloses in column 6, lines 45 that data can be backup up periodically or can be done manually by an operator. This indicates that the printer has at least partial control in the backing up of important data to a data backup device.

Regarding claim 52, Indei discloses wherein setting data is generated by said printer (first sentence of the paragraph that important data is formed in the print control device (which is part of the printer server 5))

II. Claims 8, 25, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Indei (U.S. Patent No. 5,131,077), in view of the applicant's submitted prior art in the background of the specification, and further in view of Kawabuchi et al (U.S. Patent No. 5,884,112)

Regarding claims 8 and 25, from the rejection to claim 6 above, the operator can specify any desired time in which to backup the data in the primary memory to the reserve memory (i.e. floppy disk).

Although, neither Indei nor the applicant's background discloses the backing up of data when power is turned off, it is inherent for electronic machinery such as printers to have power. Conventional printers have a power button for turning the printer on and off. Again, the operator can decide to back up the data at any time (Indei, column 6, lines 48-49).

The tertiary reference, Kawabuchi, discloses in column 9, line 46 – column 12, line 3 that data can be backed up when the power of the copying machine is turned off. Again, the type of data backed up and the location of the memories has been suggested by Indei and the applicant's specification. Kawabuchi is cited to simply show that backing up of data can occur when a machine is powered off.

All three references are in the art of printing and making backups of important information. Therefore, it would be obvious to one of ordinary skill in the art to backup the data before the power is turned off since one would have understood that power loss is usually associated with data loss. The motivation would be to prevent loss of important data.

Regarding claim 35, although, neither Indei nor the applicant's background discloses the backing up of data when power is turned off, it is inherent for electronic machinery such as printers to have power. Conventional printers have a power button for turning the printer on and off. Again, the operator can decide to back up the data at any time (Indei, column 6, lines 48-49). The tertiary reference, Kawabuchi, discloses an apparatus with a backup memory capable

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of saving information when power is turned off and then back on (column 9, line 46 – column 12, line 3) Again, the motivation would be the same as the rejection to claim 8 above.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

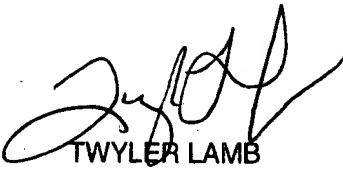
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yixing Qin whose telephone number is (571)272-7381. The examiner can normally be reached on M-F 9:30-6:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler Lamb can be reached on (571)272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

YQ


TWYLER LAMB
SUPERVISORY PATENT EXAMINER